

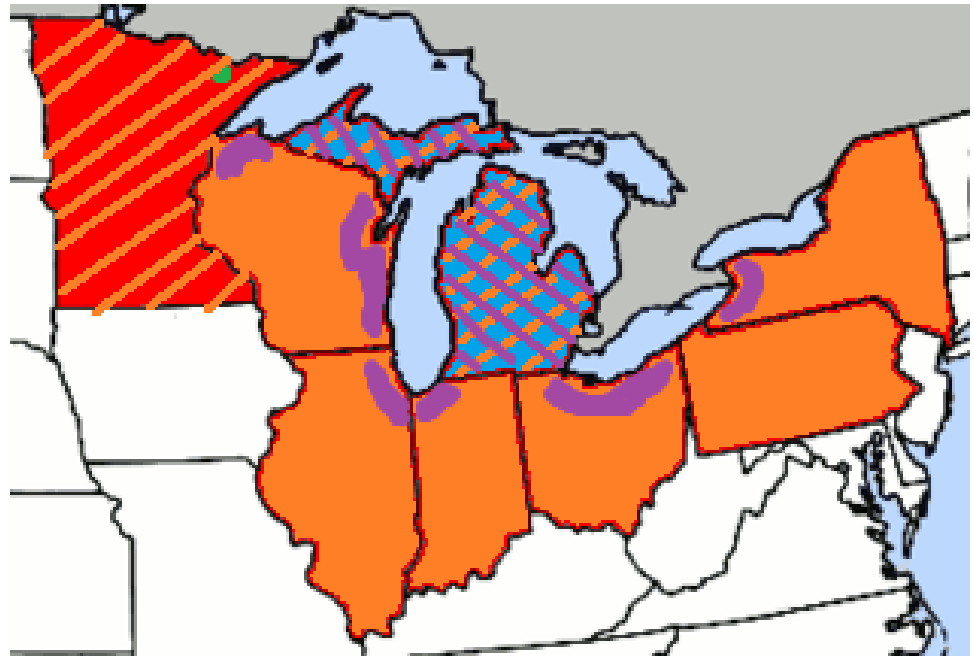
Synthesis of Recent AIS Assessments in the Great Lakes: Is Outreach Working?

Doug Jensen
Minnesota Sea Grant
and
Katherine Hollins
Great Lakes Commission

Fall Meeting
November 19-20, 2014
Ann Arbor, MI

Focus on 6 Assessments

- * '14 **Cornell** Angler Survey
- * '13 **Wisconsin** Boaters and Anglers Survey
- * '13 **Organisms-In-Trade** Event Survey* (all GL states)
- * '12 **Kawishiwi** Watershed AIS Survey
- * '12 **Michigan** ANS and Boating Survey
- * '13 **Regional** Angler Survey



* not represented in all slides

Surveys Not Included

- * 2014 Illinois's recreational water users (ongoing)
- * 2013 Sea Grant / Natural History Survey
- * 2012 Michigan Survey
- * 2014 Cornell Regional Bait Dealer Survey
- * 2014 AIS Outreach to Boaters and Anglers in the Lake Ontario Basin

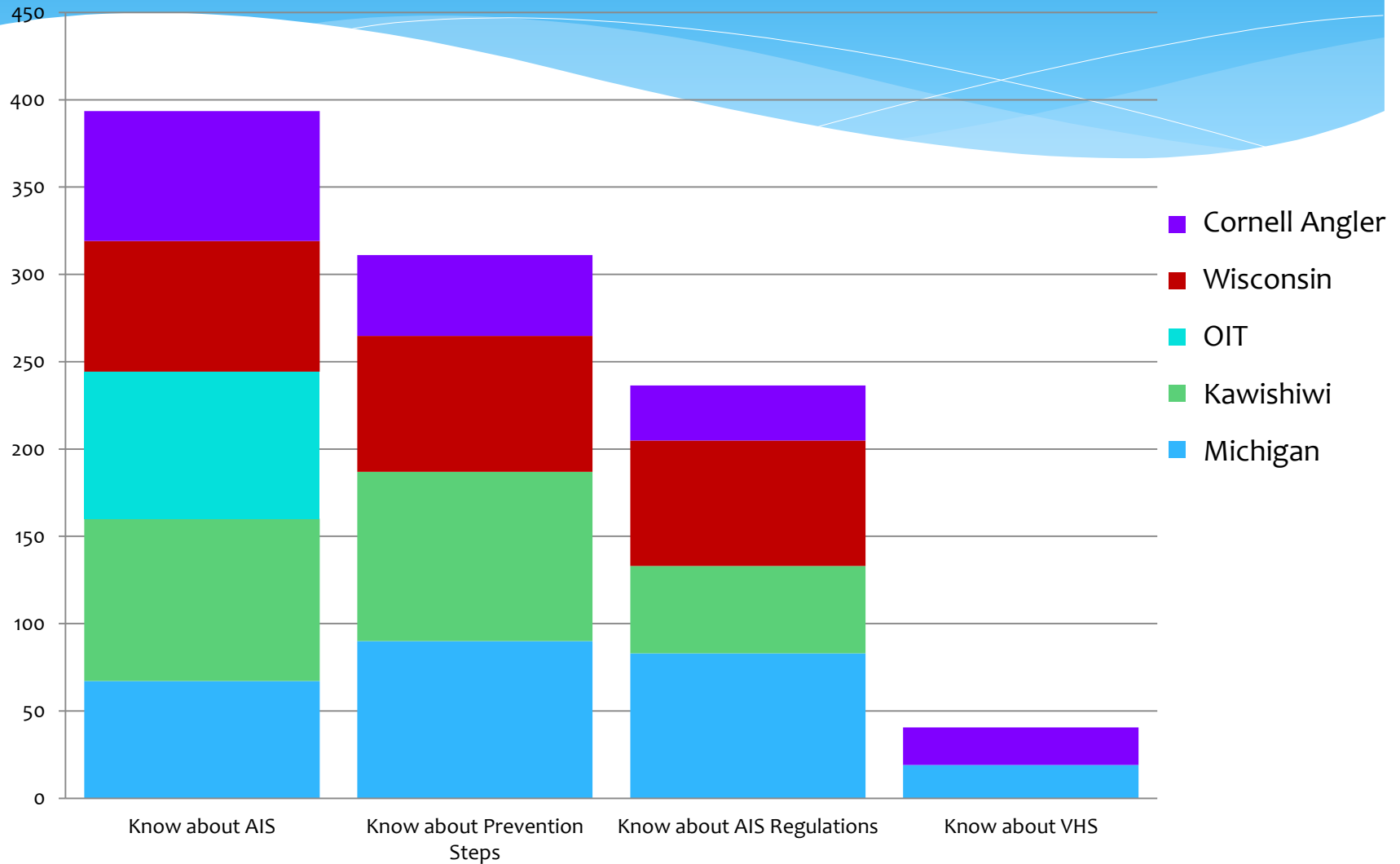
Common Survey Objectives

- * Evaluate effectiveness of AIS prevention campaigns, programs, regulations, and sources for information
- * Assess risks for spread of AIS to the watershed
- * Determine awareness, attitudes, knowledge, and behaviors concerning AIS
- * Make recommendations for more effective outreach (communication, education, K-12/non-formal) efforts
- * Assess whether AIS outreach actually prevented, slowed, or minimized impacts

Audience Types

- * 30,000 Regional angler survey (NAFCM, n= 2,018; 7%)
- * 6,000 licensed anglers in IL, IN, MI, NY, OH, & WI (n= 1,487; 25%)
- * 1,500 Wisconsin registered boaters (n=869; 58%)
- * 654 aquarists/water gardeners at 16 GL state event/garden shows (n=542; 83%)
- * 2,210 property taxpayers in Kawishiwi Watershed (n=810; 37%)
- * 1,000 Michigan registered boaters (n=371; 37%)

Awareness of AIS





Temporary Tattoo

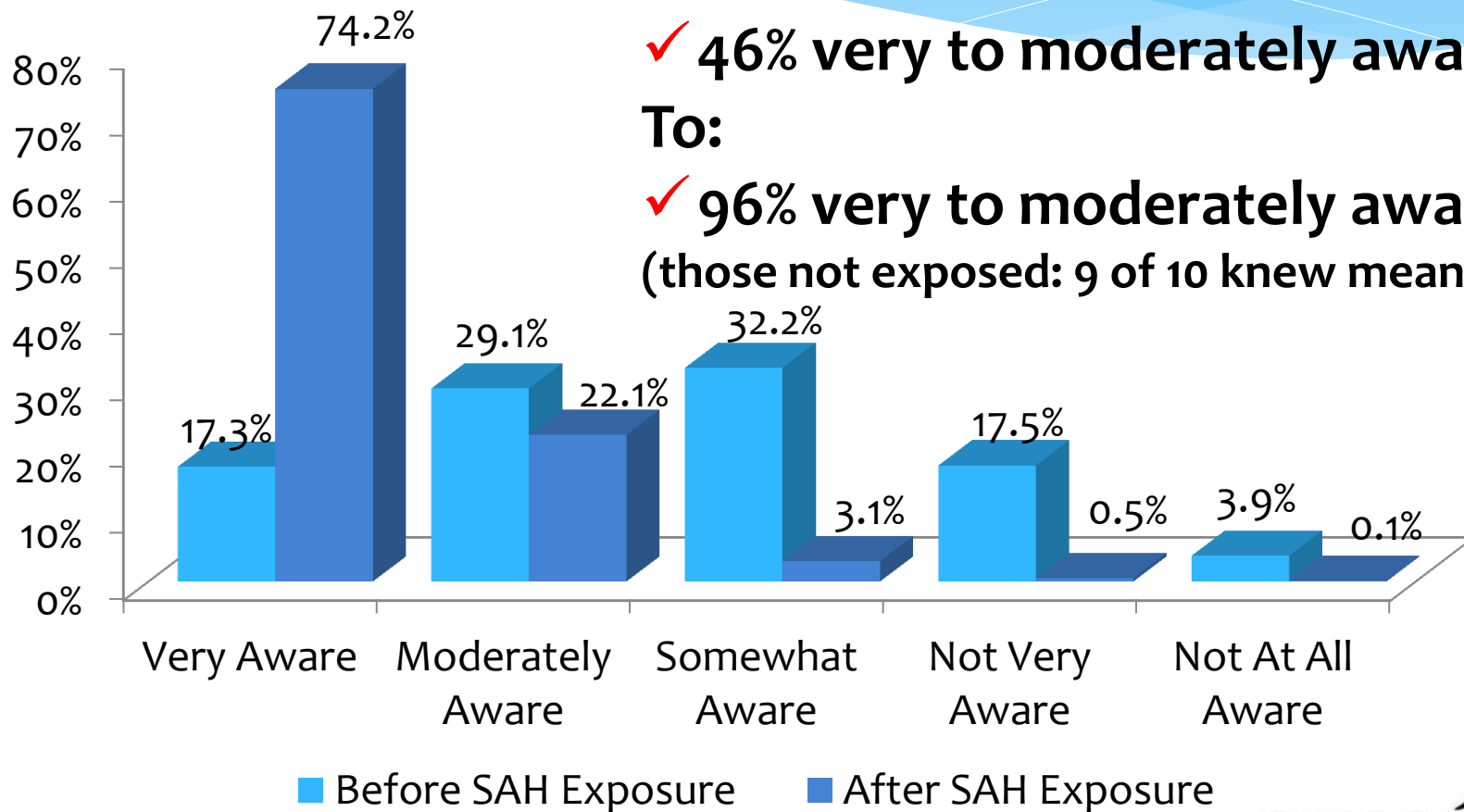
Regional Angler Survey: Comparison of Awareness Before & After Exposure to SAH!

From:

✓ **46% very to moderately aware**

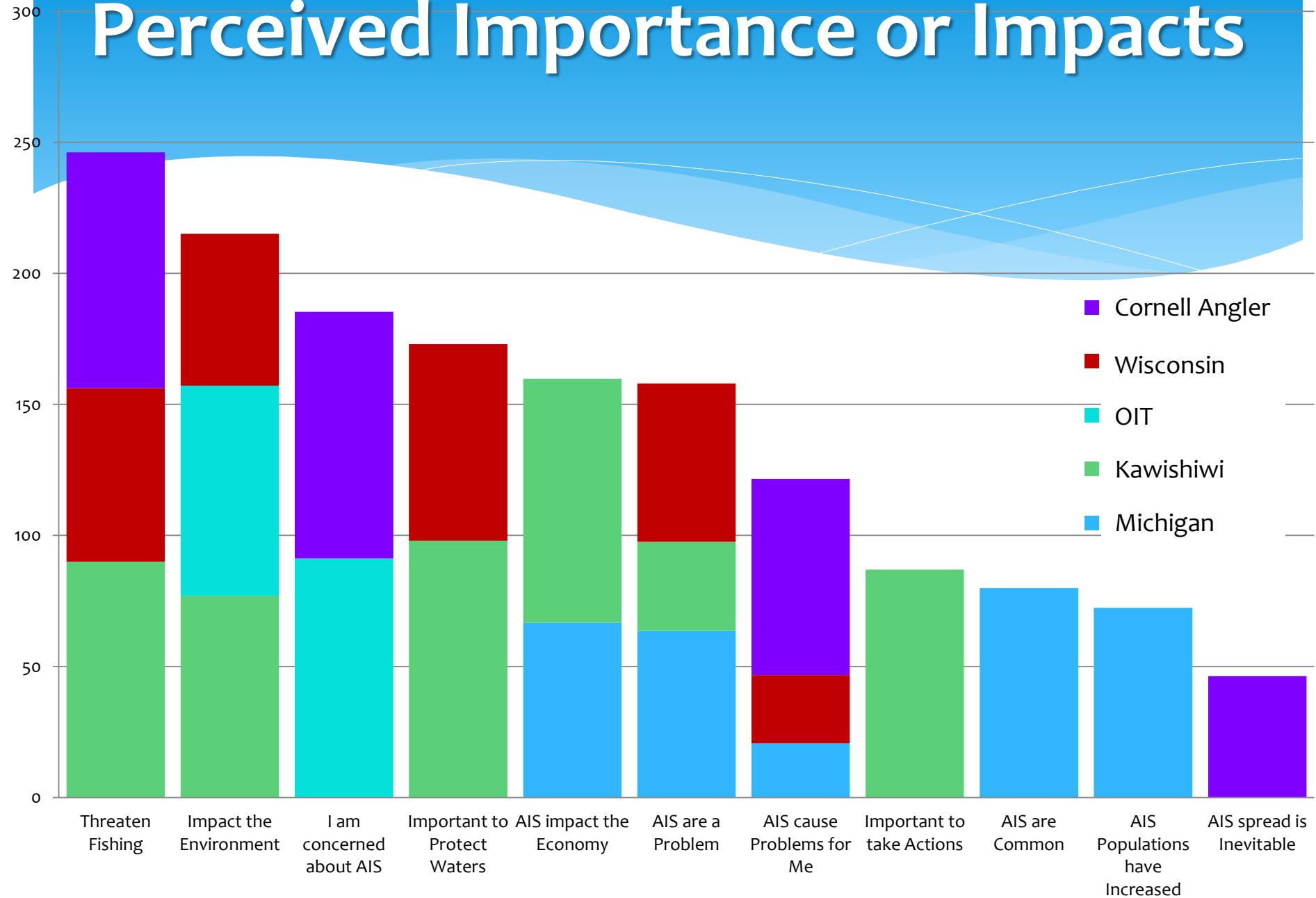
To:

✓ **96% very to moderately aware**
(those not exposed: 9 of 10 knew meaning)



Base: Seen SAH messages/logo N = 1,428/Before; N = 1,431/After

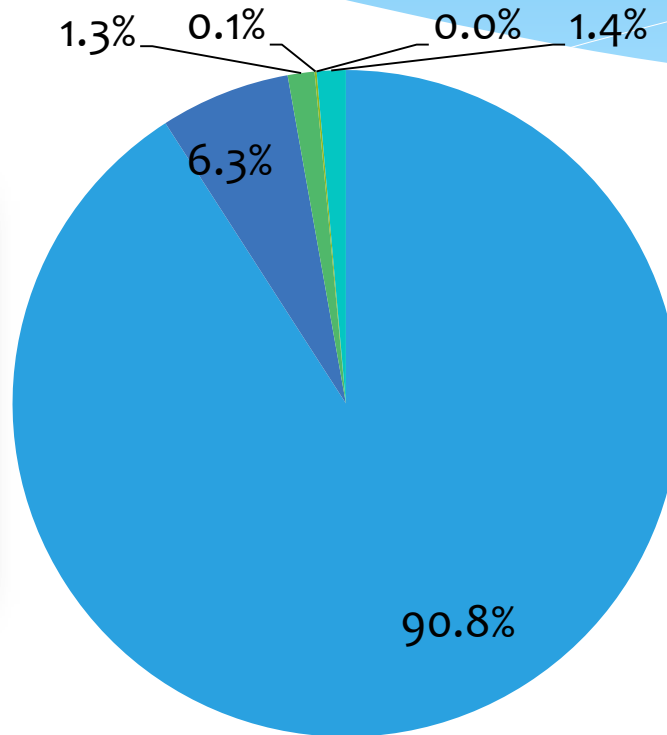
Perceived Importance or Impacts



Regional Angler: Importance of Taking Action to Prevent the Spread of AIS



'08 MN Billboard near I-Falls

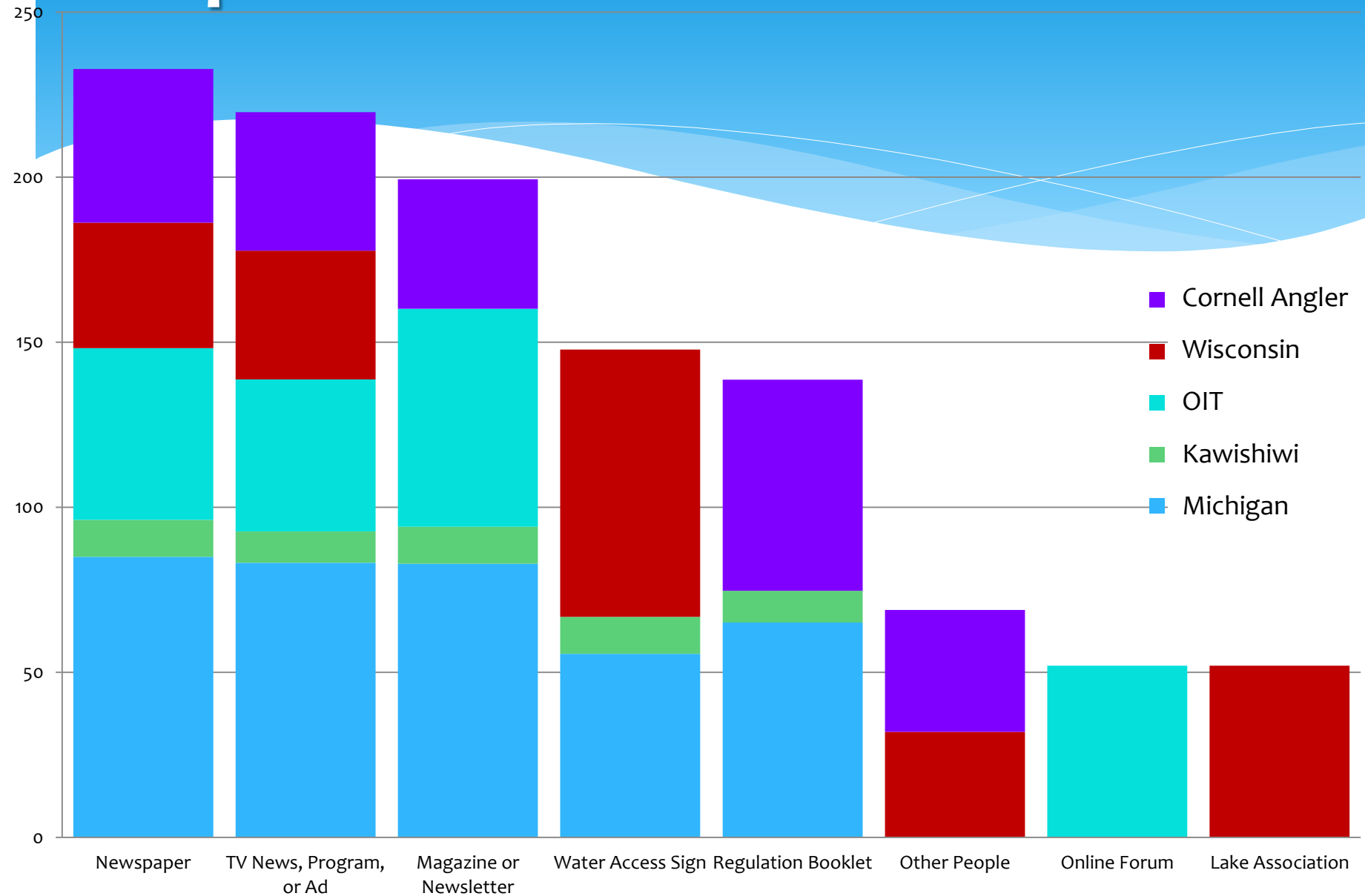


97%
perceive
AIS as a
threat in
the Great
Lakes

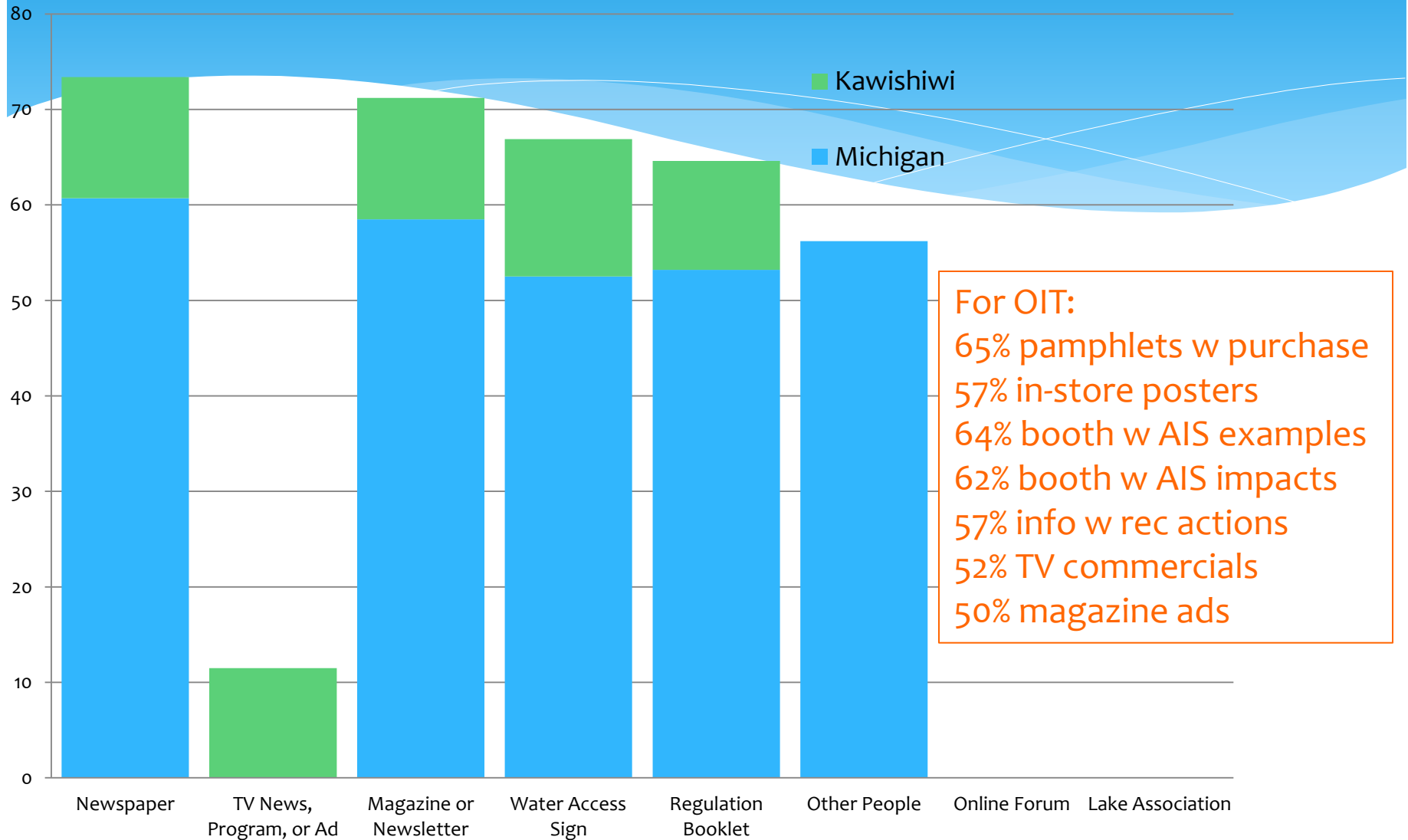
■ Very Important ■ Moderately Important ■ Somewhat Important
■ Not Very Important ■ Not At All Important ■ Don't Know/Not Sure

Base N = 2,013

Top Sources for AIS Information



Most Effective AIS Sources



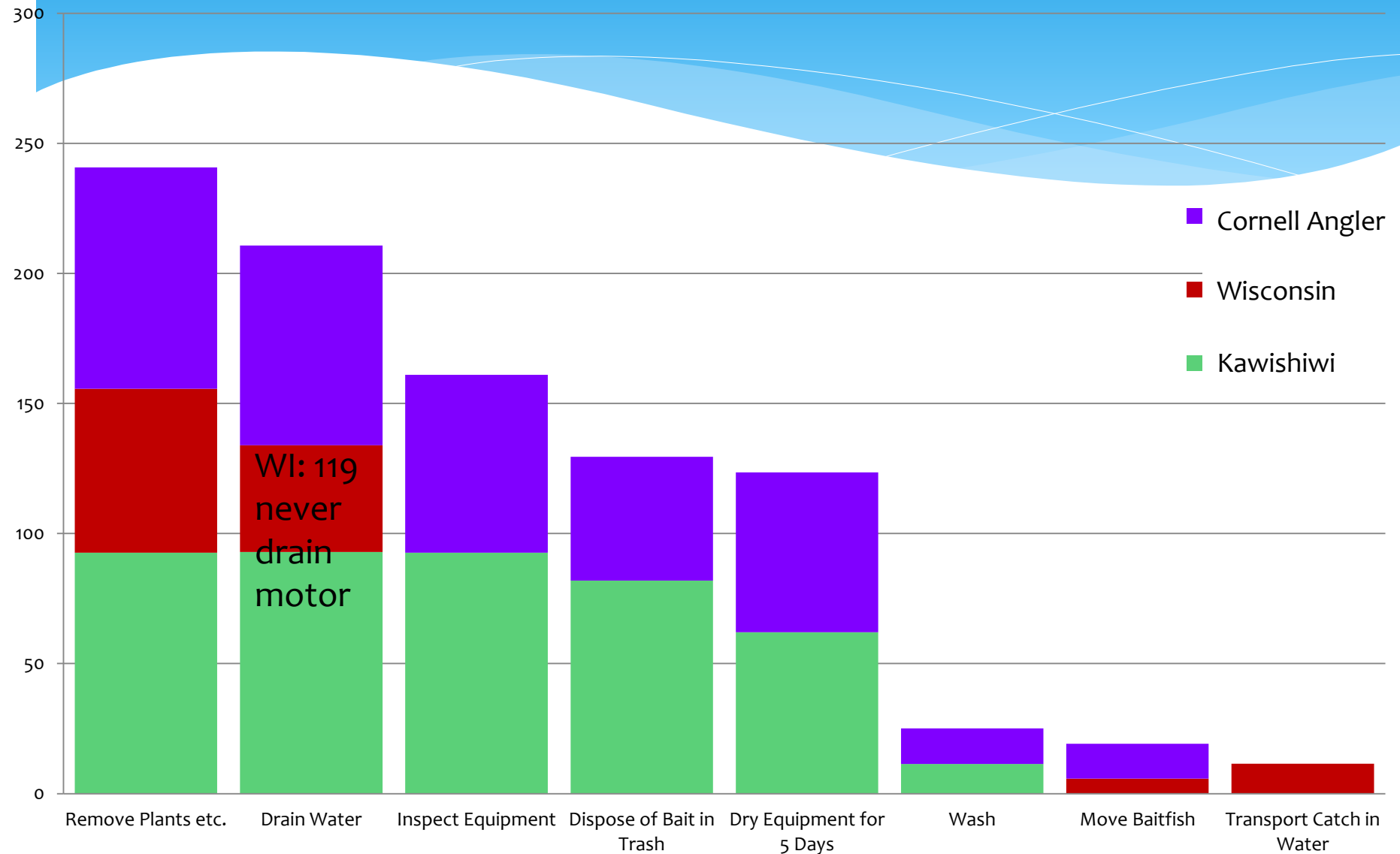


KWPP vs Regional Angler Survey

"Most Effective" AIS Information Sources	# of Responses	KWPP (Regional) % of Responses
Water access signs	304	14.4 (14.1)
Newspapers or magazines	268	12.7 (18.4)
Television ads	243	11.5 (10.7)
Regulation booklets	241	11.4 (4.0)
Billboards	147	7.0 (1.7)
Radio ads	139	6.6 (2.4)
Brochures, fact sheets	134	6.4 (2.7)
Signs along roadways	109	5.2 (1.7)
Bait shop posters	97	4.6 (6.9)
Web sites	91	4.3 (7.9)
Watercraft inspections	74	3.5 (2.1)
Newspaper ads	66	3.1 (4.8)
Displays at rest areas	52	2.5 (0.9)
Regulation cards	31	1.5 (4.0)
Highway radio messages	24	1.1 (0.0)
Kiosk at sporting goods stores	21	1.0 (1.0)
Stickers	19	0.9 (0.6)
Identification cards	10	0.5 (2.7)
Total	2,110	100%

For comparison: Numbers in parentheses from 2013 GL AIS Angler Survey

Comparison of Past Behaviors





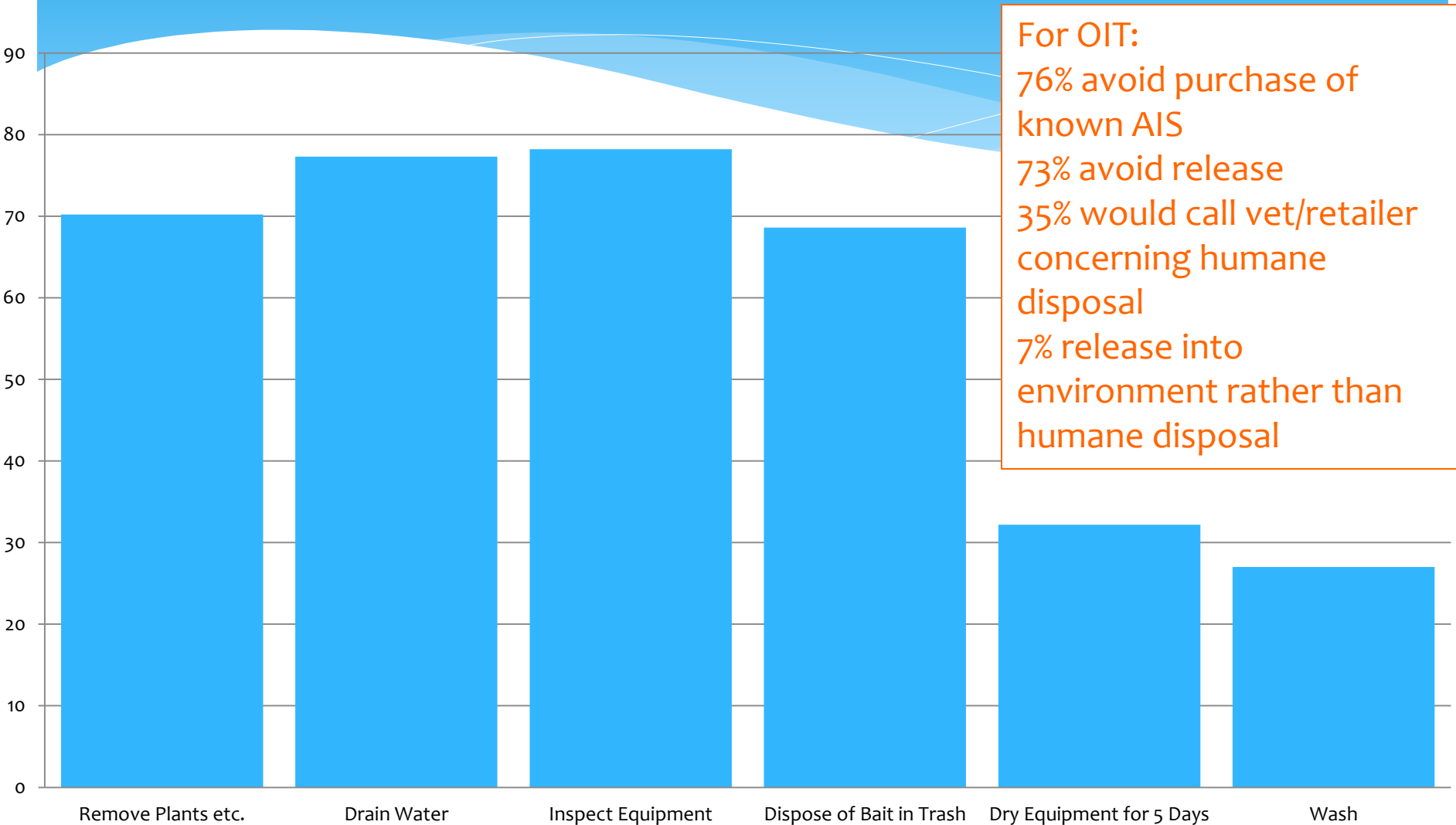
KWPP vs Regional Angler Survey: Actions Taken



Ranking	Action Taken	KWPP (Regional) Percent “Always” or “Usually”
VH	Drain water from motor, bilge and live well	92.9% (94.2%)
VH	Inspect and remove aquatic plants, animals and mud from watercraft, motor and trailer before leaving access	92.6% (90.1%)
M	Dispose of unwanted live bait, worms and fish parts in the trash	81.9% (88.4%)
M	Dry everything for at least 5 days before use	62.2% (68.8%)
L	Rinse watercraft and equipment with garden hose	33.0% (70.2%)
L	Wash watercraft with high pressure or hot water	11.4% (45.0%)

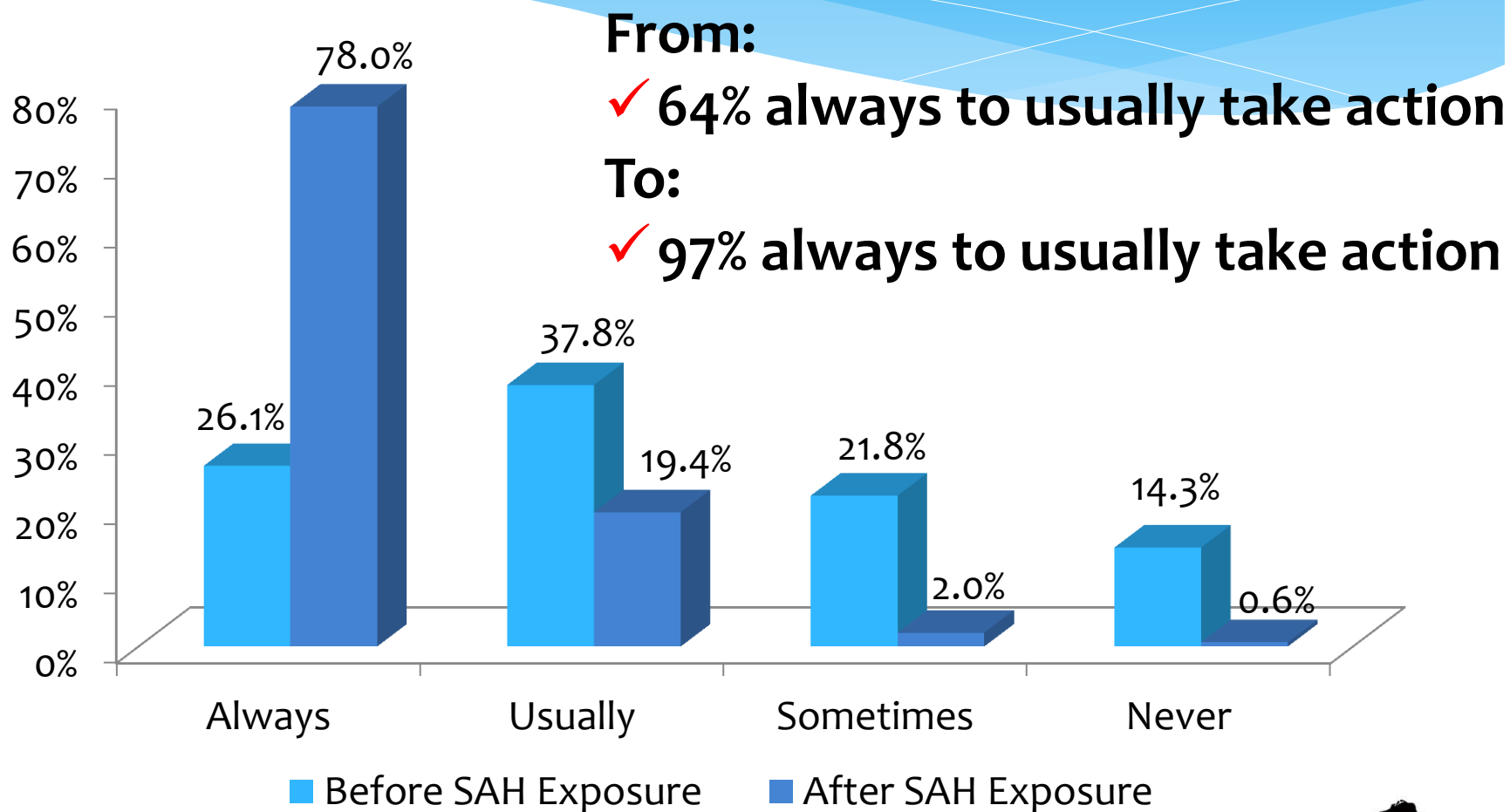
For comparison: Numbers in parentheses from 2013 GL AIS Angler Survey

MI: Comparison of Future Behaviors



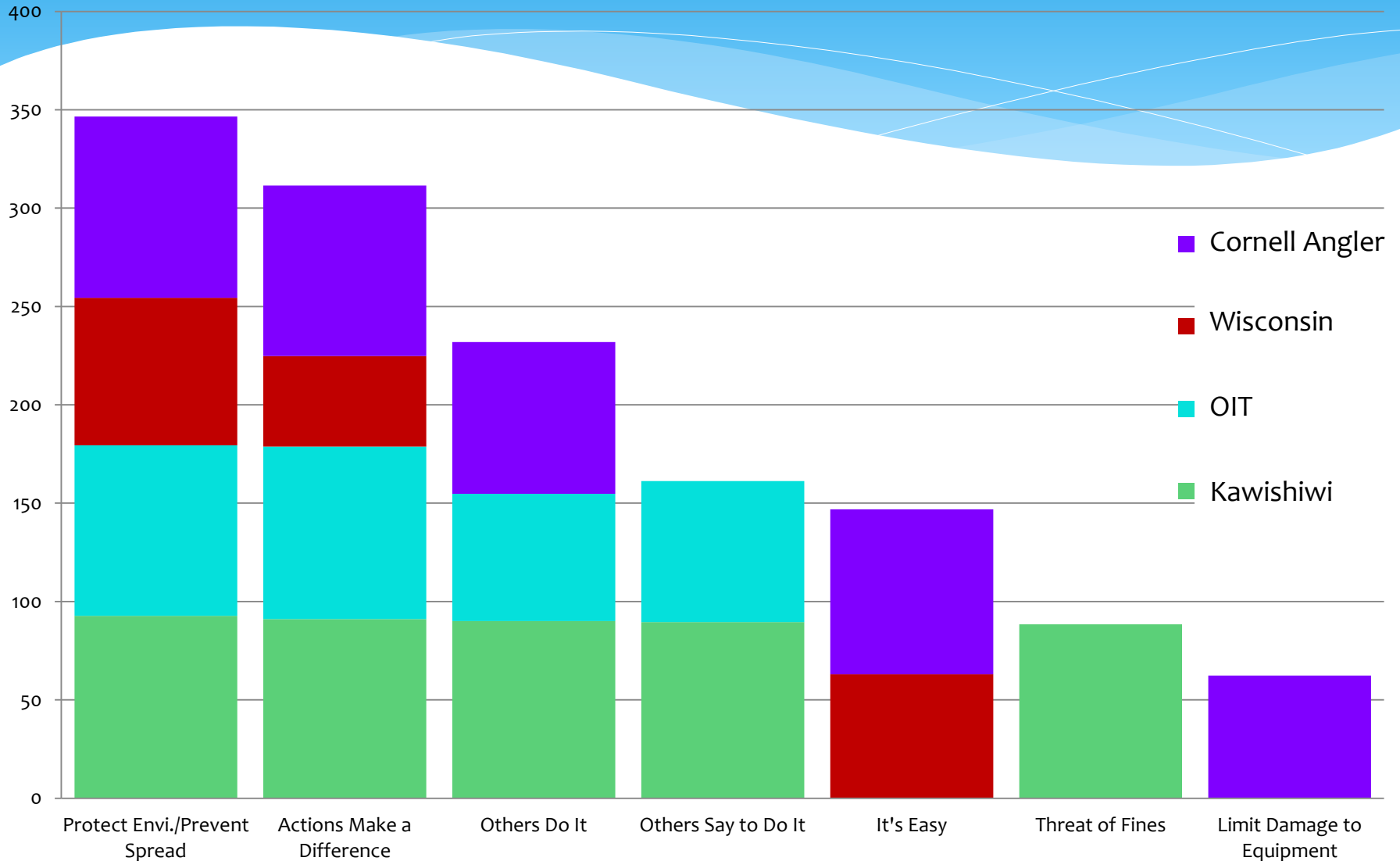


Regional: Comparison of Actions Taken Before & After Exposure to SAH!



Base: Who recreated on water during the last 12 months N = 1,766 (before) N = 1,762 (after)

Motivations for Taking Actions





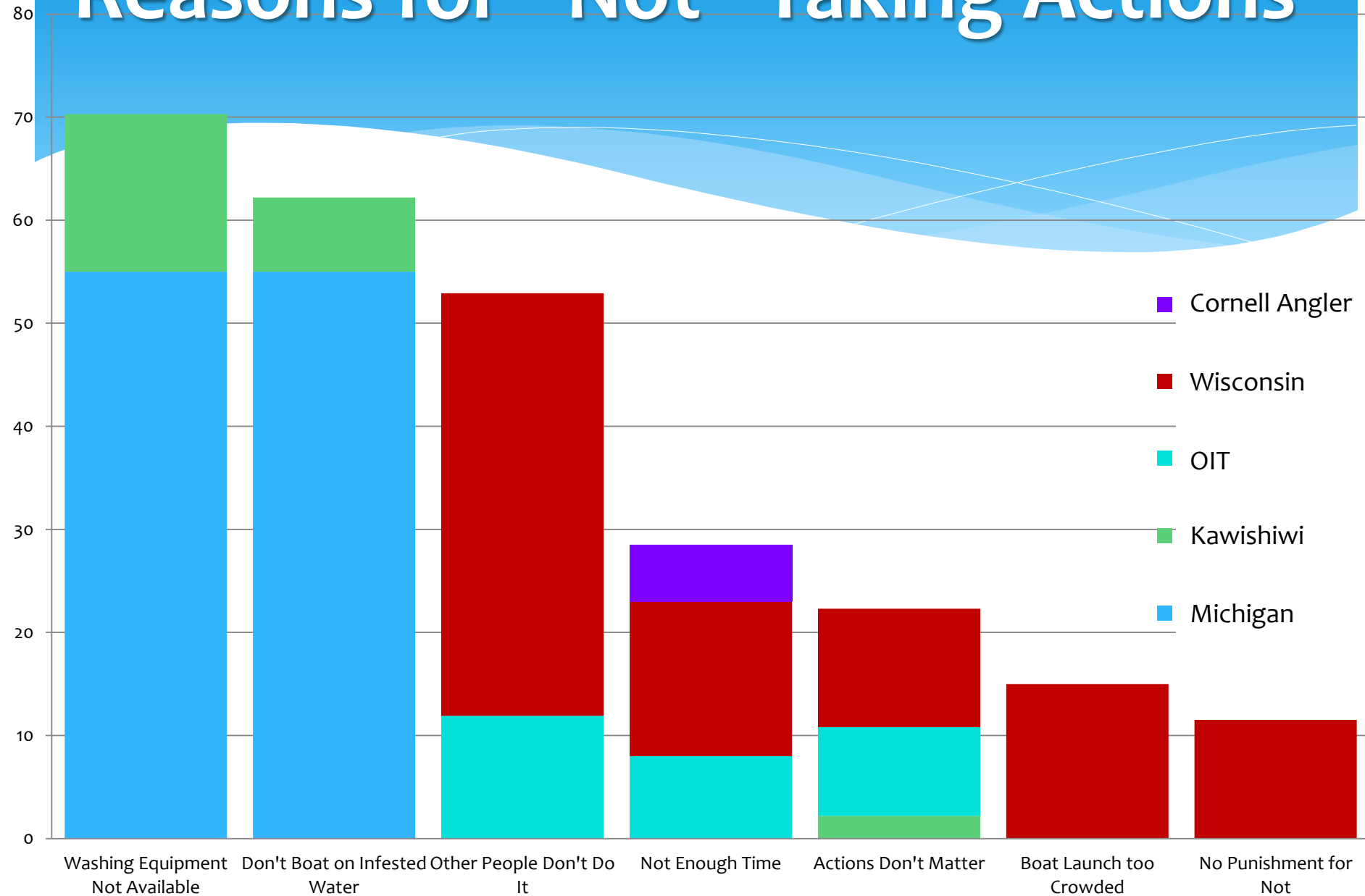
KWPP vs Regional Angler: Motivations for Taking Actions



Ranking	Reason/"Influencer"	KWPP (Regional) Very to Somewhat Effective %
VH	A desire to keep AIS out of our lakes and rivers	92.7 (98.6)
VH	The feeling of personal responsibility; my actions make a difference	91.1 (97.9)
VH	Seeing other people taking action	90.1 (89.7)
VH	Friends, relative or acquaintances advising me to take action	89.5 (81.8) MN only
H	Threats of fines that would cost me money	88.4 (78.4) 68/94
H	Laws or regulation that require actions to prevent transport of AIS	85.6 (87.0) 57/57
H	Threat of enforcement by conservation or other law enforcement officers	85.5 (78.8) 61/53
M	The desire to prevent damage to my boat, equipment or personal property	66.0 (92.9)
M	Embarrassment of being found in violation	65.9 (67.2)

For comparison: Numbers in parentheses from 2013 GL AIS Angler Survey

Reasons for “Not” Taking Actions



Reasons for “Not” Taking Actions

Ranking	Reasons for Not Taking Actions	KWPP (Regional) % Response*
No Risk	I did not transport the boat to another body of water	61.0 (66.9)
Low	No boat washing equipment was available	15.3 (22.0)
Low	I was not in waters that had AIS	7.2 (12.3)
Very Low	I did not know what I was supposed to do	2.9 (6.4)
	I believed that the current regulations were ineffective	2.2 (2.1)
	It is inconvenient, I did not have the time	1.7 (5.6)
	I did not realize the importance of my actions	1.3 (7.2)
	Spread of AIS is only a matter of time; my actions won't help	1.3 (1.4)
	I forgot	1.1 (6.0)
	I was physically unable	0.8 (2.4)
	AIS are everywhere anyway; my actions won't help	0.8 (0.7)
	I believed it only takes one to cause an infestation; my actions won't help	0.5 (2.1)
	I did not want anyone telling me what to do	0.3 (0.5)
	I did not believe that AIS was a problem; I did not care	0.3 (0.5)
Jerk	I was willing to pay the fine	0.0 (0.3)

Base: Recreated during the last 12 months. Percents adjusted to exclude those who “did not use watercraft or live bait in last 12 mo N = 1,222
For comparison: Numbers in parentheses from 2013 GL AIS Angler Survey



Summary:

Take Away Messages

- * Dozen + assessments conducted last 3 years showing impacts
- * Awareness and understanding of threats increased
- * Knowledge and motivation concerning regulations increased*
- * Messages more uniform due largely from SAH resulting in desired behaviors
- * Reasons for taking action are based on personal and social norms and threats of economic impacts
- * Reasons for not taking actions are ~3-5%, after audience effectively targeted
- * Retailers are responsible for education; messages need to link actions to benefits

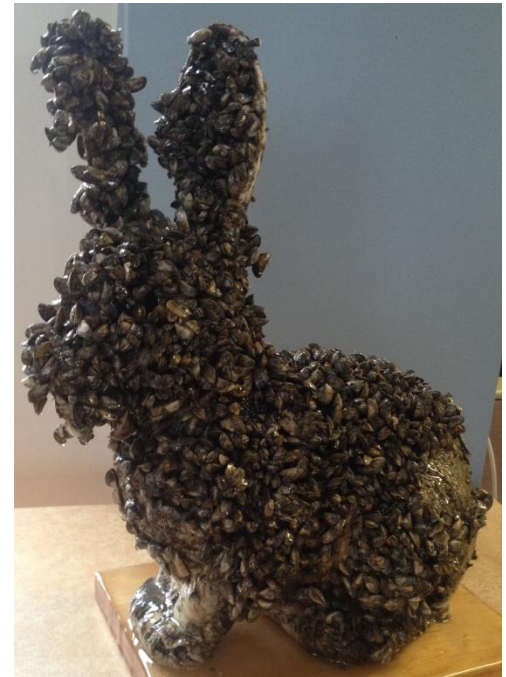
Knowledge of AIS Regulations: Take Away Messages

- Cornell - Wisconsin and New York Anglers
 - ~75% aware of rules about transport /disposal of unwanted baitfish
- Cornell - Ohio Anglers
 - 50% indicated they were not aware of any rules
- WI - High awareness of laws and regulations:
 - Launching or leaving with plants or prohibited animals attached
- WI - Uncertainty among boaters about laws and regulations:
 - Moving their boat between waterbodies
 - Leaving access with water onboard, bait buckets, etc.
 - Leftover minnows
 - Keeping fish caught from waters known to contain VHS
- KW - 50%+ correct answers regarding most regulations
- KW - More awareness needed:
 - Use water from home to reuse minnows
 - Transportation of game fish

More Take Away Messages

- OIT - Most (84%) agree/strongly agree that retailers are responsible for educating consumers to prevent the spread of AIS
- Cornell - Actions taken by anglers to prevent AIS spread varied by state:
 - WI anglers ranked, others in middle, OH anglers lowest
 - Likely due to differences on available outreach emphasis, messaging, resources, staff, etc.

Don't release Bunnies!



Citation Credits

- Connelly, N.A., T.B. Lauber, and R.C. Stedman. (2014) Reducing the Spread of Aquatic Invasive Species and Fish Pathogens in the Great Lakes: The Role of Anglers. HDRU Publ. No. 14-7. Dept of Nat. Resour., Coll. Agric. and Life Sci., Cornell Univ., Ithaca, N.Y. 36 pp.
- Jensen, D., Conzemius, P., Hannigan, D., and Landry, P. (in prep.) 2013 Great Lakes AIS Angler Survey.
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- Mayer, J., and Seekamp, E. (2014) *Addressing Aquatic Invasive Species in the Great Lakes: Survey Results from Organisms-in-Trade Event Participants*. 93 pp.
- Witzling, L., and Shaw, B., (2014) *Aquatic Invasive Species Prevention: Survey of Wisconsin Boaters and Anglers*.

Thank you!